

Appl. No. 10/721,632

Amdt. Dated August 12, 2005

Reply to Office Action of May 13, 2005

REMARKS

This is a full and timely response to the non-final Office action mailed May 13, 2005. Reexamination and reconsideration in view of the foregoing amendments and following remarks is respectfully solicited.

Claims 1, 4-8, and 11-17 are now pending in this application, with Claims 1 and 8 being the independent claims. Claims 1, 4, 8, and 11 have been amended, and Claims 2, 3, 9, 10, 18, and 19 have been canceled herein. No new matter is believed to have been added.

Obviousness-type Double Patenting Rejections

Claims 3, 4, and 9-14 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over Claims 1-17 of co-pending Application Serial No. 10/713,759, and over Claims 1-18, 23, and 25-31 of co-pending Application Serial No. 10/741,114. These rejections are respectfully traversed.

As is clearly delineated in the M.P.E.P., before a nonstatutory double patenting rejection can be made, it must first be determined that one or more claims in the application being examined defines an invention that is merely an obvious variation of an invention claimed in another application. See M.P.E.P. 804.II.B.1. In the instant application, independent Claims 1 and 8 now recite specific features that do not appear in any of the claims of either the '759 application or the '114 application. Moreover, as is explained below in response to the rejections under 35 U.S.C. § 103, Applicants submit that the specific features now recited in independent Claims 1 and 8 are not "merely obvious variations" of the inventions defined in either the '632 application or the '759 application.

In view of the above, Applicants respectfully solicit reconsideration and withdrawal of the obviousness-type double patenting rejections.

Rejections Under 35 U.S.C. § 103

Claims 1, 2, 5, 8, 15, 18, and 19 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over U.S. Patent No. 4,906,812 (Nied et al.) in view of U.S. Patent

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No. 3,843,865 (Nath); Claims 3, 4, 9, 10, 13, and 14 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Nied et al., Nath, and U.S. Patent No. 4,564,736 (Jones et al.); Claims 6, 7, 16, and 17 stand rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Nied et al., Nath, and U.S. Patent No. 3,821,510 (Muncheryan); Claim 11 stands rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Nied et al., Nath, Jones et al., Muncheryan; and Claim 12 stands rejected under 35 U.S.C. § 103 as allegedly being unpatentable over Nied et al., Nath, and U.S. Patent No. 6,294,754 (Nagura et al.). These rejections are respectfully traversed.

Independent Claims 1 and 8 each relate to a hand-held laser fusion welding assembly that includes a main body, a nozzle, and an end cap. The main body is dimensioned to be grasped by a hand and is adapted to couple to a laser delivery system, a gas supply system, and a coolant supply system. The main body has an internal gas flow passage and coolant flow passages extending therethrough. Independent Claims 1 and 8 now recite, *inter alia*, that the nozzle is releasably coupled to a first end of the main body, the end cap is releasably coupled to a second end of the main body and includes a gas flow passage in fluid communication with the main body gas flow passage, one or more coolant flow passages each in fluid communication with one of the main body coolant flow passages, one or more filler media delivery flow passages extending through the main body; and one or more filler media delivery flow passages extending through the end cap, each end cap filler media delivery flow passage adapted to receive a filler media therein, and each in fluid communication with one of the main body filler media delivery flow passages.

Nied et al. relates to a fiber optic laser joining apparatus that includes gas flow passages (70) that is defined between an outer housing (40) and a non-metallic inner support member (42) that is spaced apart from the inner surface of the outer housing (FIG. 1; col. 4, ll. 30-44). Nied et al. discloses that gas preferably flows through the passages (70) at a relatively high rate to assist in cooling the tool (col. 5, l. 68 to col. 6 l. 1).

Nath relates to a device that uses laser light for working of various materials and discloses a light guide rod (20) held inside flexible tubing (19) by a plurality of spacers

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(21). The flexible tubing (19) is attached to another tube (18) that slides telescopically within another tube (17). The light guide rod (20) receives and transmits laser light toward a workpiece. The flexible tubing (19) is formed into a nozzle (22) at one end, and a stream of gas flows within the flexible tubing and around the light guide rod (FIG. 1; col. 4, ll. 27-47. In another embodiment, a pump (43) pumps an immersion liquid, such as propanol, through the flexible tubing and around the light guide rod to prevent the light guide rod from getting hot (FIG. 3; col. 6, ll. 21-47).

It is clear from the above, that neither Nied et al. nor Nath disclose, or even remotely suggest, providing both a gas flow passage and one or more coolant flow passages, or providing a nozzle and end cap that are releasably coupled to the main body. Moreover, as is readily admitted to in the Office action, neither of these citations discloses or suggests filler media deliver flow passages extending through the end cap and main body.

The Office action alleges that Jones et al. makes up for the above-noted deficiency regarding the filler media delivery flow passages. Applicants must disagree. Jones et al. relates to a hand held laser tool. This citation, however, does not teach or suggest filler media delivery flow passages extending through the end cap and main housing, as is now recited in independent Claims 1 and 8. Rather, all Jones et al. teaches is that hand held laser welding operations, including "[w]elding with the addition of filler material," are feasible with the hand held tool (col. 4, ll. 13-16). Nowhere does this citation state anything regarding filler medial delivery flow passages extending through any portion of the tool.

In view of the foregoing, it is clear that none of Nied et al., Nath, or Jones et al. disclose, either alone or in combination, at least the combination of features now recited in independent Claims 1 and 8.

As regards Muncheryan and Nagura et al., neither of these citations is understood to make up for the above-noted deficiencies of Nied et al., Nath, and Jones et al. As such, Applicants respectfully request withdrawal of the § 103 rejections.

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Conclusion

Based on the above, independent Claims 1 and 8 are patentable over the citations of record. The dependent claims are also submitted to be patentable for the reasons given above with respect to the independent claims and because each recite features which are patentable in its own right. Individual consideration of the dependent claims is respectfully solicited.

The other art of record is also not understood to disclose or suggest the inventive concept of the present invention as defined by the claims.

Hence, Applicant submits that the present application is in condition for allowance. Favorable reconsideration and withdrawal of the objections and rejections set forth in the above-noted Office Action, and an early Notice of Allowance are requested.

If the Examiner has any comments or suggestions that could place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the below-listed number.

If for some reason Applicant has not paid a sufficient fee for this response, please consider this as authorization to charge Ingrassia, Fisher & Lorenz, Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

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